

Please type a plus sign (+) inside this box

PTO/SB/05 (03-01)

Approved for use through 10/31/2002 OMB 0651-0032

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.

648.41111X00

First Inventor

EZUMI, MASAKUNI

Title

FRICTION STIR WELDING METHOD, AND HOLLOW SHAPE  
MEMBER FOR FRICTION STIR WELDING

Express Mail Label No.

**APPLICATION ELEMENTS**

SEE MPEP chapter 600 concerning utility patent application contents.

**ADDRESS TO:**

Assistant Commissioner for Patents  
Box Patent Application  
Washington, DC 20231

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
Submit an original and a duplicate for fee processing.
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27
3. ☒ Specification [Total Pages: **28**]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Pages: **3**]
5. Oath or Declaration [Total Pages: **5**]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
Named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b)
6. ☐ Application Data Sheet See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
  - ii. ☐ paper
- c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATION PARTS**

9. ☒ Assignment Papers (cover sheet & documents(s))
10. ☐ 37 CFR 3.73(b) Statement ☒ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure ☐ Copies of IDS Citations  
Statement (IDS)/PTO-1449
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☒ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☒ Other **LIST & COPIES OF PRIOR ART W/ REFS.;**  
**CREDIT CARD PAYMENT FORM- FIGS. 1-5**

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.:

Prior application information: Examiner: \_\_\_\_\_ Group Art Unit: \_\_\_\_\_

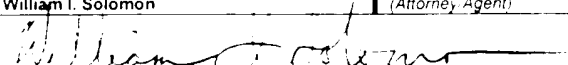
For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

**19. CORRESPONDENCE ADDRESS**

020457	
(Insert Customer No. or Attach bar code label here)	
ANTONELLI, TERRY, STOUT & KRAUS, LLP	
Address	
City	State
Country	Zip Code
Telephone	(703) 312-6600
Fax	(703) 312-6666
Name	William I. Solomon
Registration No. / Attorney, Agent	28,565
Signature	Date
	January 25, 2002

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<h1 style="margin: 0;">FEE TRANSMITTAL</h1> <h2 style="margin: 0;">for FY 2002</h2> <p style="margin: 0;"><i>Patent fees are subject to annual revision.</i></p>				<b>Complete if Known</b>																																																																																																																																																																																							
				Application Number																																																																																																																																																																																							
				Filing Date		January 25, 2002																																																																																																																																																																																					
				First Named Inventor		EZUMI, MASAKUNI																																																																																																																																																																																					
				Examiner Name																																																																																																																																																																																							
				Group Art Unit																																																																																																																																																																																							
TOTAL AMOUNT OF PAYMENT				(\$)		1020.00																																																																																																																																																																																					
METHOD OF PAYMENT				FEE CALCULATION (continued)																																																																																																																																																																																							
<p>1. <input type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit overpayments to:</p> <p>Deposit Account Number <b>01-2135</b></p> <p>Deposit Account Name <b>Antonelli, Terry, Stout &amp; Kraus, LLP</b></p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17</p> <p><input type="checkbox"/> Applicant Claims small entity status. See 37 CFR 1.27</p>				<p>3. ADDITIONAL FEES</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Large Entity Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>105</td> <td>130</td> <td>205</td> <td>65</td> <td>Surcharge - late filing fee or oath</td> <td></td> </tr> <tr> <td>127</td> <td>50</td> <td>227</td> <td>25</td> <td>Surcharge - late provisional filing fee or cover sheet</td> <td></td> </tr> <tr> <td>139</td> <td>130</td> <td>139</td> <td>130</td> <td>Non-English specification</td> <td></td> </tr> <tr> <td>147</td> <td>2,520</td> <td>147</td> <td>2,520</td> <td>For filing a request for <i>ex parte</i> reexamination</td> <td></td> </tr> <tr> <td>112</td> <td>920*</td> <td>112</td> <td>920*</td> <td>Requesting publication of SIR prior to Examination action</td> <td></td> </tr> <tr> <td>113</td> <td>1,840*</td> <td>113</td> <td>1,840*</td> <td>Requesting publication of SIR after Examiner action</td> <td></td> </tr> <tr> <td>115</td> <td>110</td> <td>215</td> <td>55</td> <td>Extension for reply within first month</td> <td></td> </tr> <tr> <td>116</td> <td>400</td> <td>216</td> <td>200</td> <td>Extension for reply within second month</td> <td></td> </tr> <tr> <td>117</td> <td>920</td> <td>217</td> <td>460</td> <td>Extension for reply within third month</td> <td></td> </tr> <tr> <td>118</td> <td>1,440</td> <td>218</td> <td>720</td> <td>Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>128</td> <td>1,960</td> <td>228</td> <td>980</td> <td>Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>119</td> <td>320</td> <td>219</td> <td>160</td> <td>Notice of Appeal</td> <td></td> </tr> <tr> <td>120</td> <td>320</td> <td>220</td> <td>160</td> <td>Filing a brief in support of an appeal</td> <td></td> </tr> <tr> <td>121</td> <td>280</td> <td>221</td> <td>140</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>138</td> <td>1,510</td> <td>138</td> <td>1,510</td> <td>Petition to institute a public use proceeding</td> <td></td> </tr> <tr> <td>140</td> <td>110</td> <td>240</td> <td>55</td> <td>Petition to revive - unavoidable</td> <td></td> </tr> <tr> <td>141</td> <td>1,280</td> <td>241</td> <td>640</td> <td>Petition to revive - unintentional</td> <td></td> </tr> <tr> <td>142</td> <td>1,280</td> <td>242</td> <td>640</td> <td>Utility issue fee (or reissue)</td> <td></td> </tr> <tr> <td>143</td> <td>460</td> <td>243</td> <td>230</td> <td>Design issue fee</td> <td></td> </tr> <tr> <td>144</td> <td>620</td> <td>244</td> <td>310</td> <td>Plant issue fee</td> <td></td> </tr> <tr> <td>122</td> <td>130</td> <td>122</td> <td>130</td> <td>Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>123</td> <td>50</td> <td>123</td> <td>50</td> <td>Processing fee under 37 CFR 1.17(q)</td> <td></td> </tr> <tr> <td>126</td> <td>180</td> <td>126</td> <td>180</td> <td>Submission of Information Disclosure Stmt</td> <td></td> </tr> <tr> <td>581</td> <td>40</td> <td>581</td> <td>40</td> <td>Recording each patent assignment per property (times number of properties)</td> <td>40.00</td> </tr> <tr> <td>146</td> <td>740</td> <td>246</td> <td>370</td> <td>For each additional invention to be examined (37 CFR § 1.129(a))</td> <td></td> </tr> <tr> <td>149</td> <td>740</td> <td>249</td> <td>370</td> <td>For each additional invention to be examined (37 CFR § 1.129(b))</td> <td></td> </tr> <tr> <td>179</td> <td>740</td> <td>279</td> <td>370</td> <td>Request for Continued Examination (RCE)</td> <td></td> </tr> <tr> <td>169</td> <td>900</td> <td>169</td> <td>900</td> <td>Request for expedited examination of a design application</td> <td></td> </tr> <tr> <td colspan="6">Other fee (specify): _____</td> </tr> </tbody> </table>				Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	105	130	205	65	Surcharge - late filing fee or oath		127	50	227	25	Surcharge - late provisional filing fee or cover sheet		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination		112	920*	112	920*	Requesting publication of SIR prior to Examination action		113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	400	216	200	Extension for reply within second month		117	920	217	460	Extension for reply within third month		118	1,440	218	720	Extension for reply within fourth month		128	1,960	228	980	Extension for reply within fifth month		119	320	219	160	Notice of Appeal		120	320	220	160	Filing a brief in support of an appeal		121	280	221	140	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive - unavoidable		141	1,280	241	640	Petition to revive - unintentional		142	1,280	242	640	Utility issue fee (or reissue)		143	460	243	230	Design issue fee		144	620	244	310	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	50	123	50	Processing fee under 37 CFR 1.17(q)		126	180	126	180	Submission of Information Disclosure Stmt		581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00	146	740	246	370	For each additional invention to be examined (37 CFR § 1.129(a))		149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))		179	740	279	370	Request for Continued Examination (RCE)		169	900	169	900	Request for expedited examination of a design application		Other fee (specify): _____					
Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																						
105	130	205	65	Surcharge - late filing fee or oath																																																																																																																																																																																							
127	50	227	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																							
139	130	139	130	Non-English specification																																																																																																																																																																																							
147	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination																																																																																																																																																																																							
112	920*	112	920*	Requesting publication of SIR prior to Examination action																																																																																																																																																																																							
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																							
115	110	215	55	Extension for reply within first month																																																																																																																																																																																							
116	400	216	200	Extension for reply within second month																																																																																																																																																																																							
117	920	217	460	Extension for reply within third month																																																																																																																																																																																							
118	1,440	218	720	Extension for reply within fourth month																																																																																																																																																																																							
128	1,960	228	980	Extension for reply within fifth month																																																																																																																																																																																							
119	320	219	160	Notice of Appeal																																																																																																																																																																																							
120	320	220	160	Filing a brief in support of an appeal																																																																																																																																																																																							
121	280	221	140	Request for oral hearing																																																																																																																																																																																							
138	1,510	138	1,510	Petition to institute a public use proceeding																																																																																																																																																																																							
140	110	240	55	Petition to revive - unavoidable																																																																																																																																																																																							
141	1,280	241	640	Petition to revive - unintentional																																																																																																																																																																																							
142	1,280	242	640	Utility issue fee (or reissue)																																																																																																																																																																																							
143	460	243	230	Design issue fee																																																																																																																																																																																							
144	620	244	310	Plant issue fee																																																																																																																																																																																							
122	130	122	130	Petitions to the Commissioner																																																																																																																																																																																							
123	50	123	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																																							
126	180	126	180	Submission of Information Disclosure Stmt																																																																																																																																																																																							
581	40	581	40	Recording each patent assignment per property (times number of properties)	40.00																																																																																																																																																																																						
146	740	246	370	For each additional invention to be examined (37 CFR § 1.129(a))																																																																																																																																																																																							
149	740	249	370	For each additional invention to be examined (37 CFR § 1.129(b))																																																																																																																																																																																							
179	740	279	370	Request for Continued Examination (RCE)																																																																																																																																																																																							
169	900	169	900	Request for expedited examination of a design application																																																																																																																																																																																							
Other fee (specify): _____																																																																																																																																																																																											
<p><b>2. BASIC FILING FEE</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Large Entity Fee Code</th> <th>Large Entity Fee (\$)</th> <th>Small Entity Fee Code</th> <th>Small Entity Fee (\$)</th> <th>Fee Description</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>740</td> <td>201</td> <td>370</td> <td>Utility filing fee</td> <td>740.00</td> </tr> <tr> <td>106</td> <td>330</td> <td>206</td> <td>165</td> <td>Design filing fee</td> <td></td> </tr> <tr> <td>107</td> <td>510</td> <td>207</td> <td>255</td> <td>Plant filing fee</td> <td></td> </tr> <tr> <td>108</td> <td>740</td> <td>208</td> <td>370</td> <td>Reissue filing fee</td> <td></td> </tr> <tr> <td>114</td> <td>160</td> <td>214</td> <td>80</td> <td>Provisional filing fee</td> <td></td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>SUBTOTAL (1)</b></td> <td><b>740.00</b></td> </tr> </tbody> </table>				Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid	101	740	201	370	Utility filing fee	740.00	106	330	206	165	Design filing fee		107	510	207	255	Plant filing fee		108	740	208	370	Reissue filing fee		114	160	214	80	Provisional filing fee		<b>SUBTOTAL (1)</b>					<b>740.00</b>																																																																																																																																														
Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid																																																																																																																																																																																						
101	740	201	370	Utility filing fee	740.00																																																																																																																																																																																						
106	330	206	165	Design filing fee																																																																																																																																																																																							
107	510	207	255	Plant filing fee																																																																																																																																																																																							
108	740	208	370	Reissue filing fee																																																																																																																																																																																							
114	160	214	80	Provisional filing fee																																																																																																																																																																																							
<b>SUBTOTAL (1)</b>					<b>740.00</b>																																																																																																																																																																																						
<p><b>1. EXTRA CLAIM FEES</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Total Claims</th> <th>Extra Claims</th> <th>Fee from below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td>24 - 20** = 4</td> <td></td> <td>x 18.00</td> <td>= 72.00</td> </tr> <tr> <td>Indep. Claims 5-3** = 2</td> <td></td> <td>x 84.00</td> <td>= 168.00</td> </tr> <tr> <td>Multiple Dependent</td> <td></td> <td>0.00</td> <td>= 0.00</td> </tr> </tbody> </table>				Total Claims	Extra Claims	Fee from below	Fee Paid	24 - 20** = 4		x 18.00	= 72.00	Indep. Claims 5-3** = 2		x 84.00	= 168.00	Multiple Dependent		0.00	= 0.00																																																																																																																																																																								
Total Claims	Extra Claims	Fee from below	Fee Paid																																																																																																																																																																																								
24 - 20** = 4		x 18.00	= 72.00																																																																																																																																																																																								
Indep. Claims 5-3** = 2		x 84.00	= 168.00																																																																																																																																																																																								
Multiple Dependent		0.00	= 0.00																																																																																																																																																																																								
<p><b>2. SUBTOTAL (2) \$ 240.00</b></p>																																																																																																																																																																																											
<p><b>SUBTOTAL (3) (\$), 40.00</b></p>																																																																																																																																																																																											

SUBMITTED BY		Complete (if applicable)			
Name (Print Type)	William I. Solomon	Registration No. (Attorney Agent)	28,565	Telephone	703-312-6600
Signature		Date	01/25/02		

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

This form is estimated to take 12 hours to complete. Time will vary depending upon the needs of the individual case. Any comments or suggestions for improvement should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.